

Density at 60° F. :—

STATION 180.

Surface, . . . . .	1·02611	300 fathoms, . . . . .	1·02603
100 fathoms, . . . . .	1·02676	400 . . . . .	1·02630
200 . . . . .	1·02603	Bottom, . . . . .	1·02601

Depth, 2450 fathoms; deposit, Red Clay, containing about 1 per cent. of carbonate of lime (see Murray and Renard, Deep-Sea Deposits Chall. Exp.).

At 6 A.M. shortened and furled sails and got up steam. At 7 A.M. sounded in 2450 fathoms. At 8 A.M. obtained serial temperatures down to 1500 fathoms. At 10 A.M. completed observations, and at 10.20 A.M. made all plain sail. The carbonic acid was determined in bottom water, and amounted to 43·4 milligrammes per litre.

Raine Island distant at noon, 579 miles. Made good 138 miles. Amount of current 7 miles, direction N. 44° W.

**Surface Organisms**—The following were taken in the tow-nets sent down to about 20 fathoms :—*Pyrocystis*, *Globigerina*, *Orbulina*, *Pullenia*, *Pulvinulina menardii*, *Acanthometra*, many forms of Siphonophoræ, Echinoderm larvæ, *Sagitta*, *Alciopa* and other Annelids, Aphroditacean larvæ, larvæ of *Balanoglossus*, *Cypridina*, *Saphirina*, many Crustaceans and larvæ, larval Lamellibranchs, *Atlanta*, Pteropods and larvæ, small blue *Salpæ*, *Appendicularia*. The sarcode in *Pullenia* was bright red, sometimes surrounding the shell, and in one case a *Coscinodiscus* was noticed in it.

ORGANISMS FROM  
SURFACE-NETS.

**Station 181** (Sounding 311), Fiji to Raine Island (see Chart 27 and Diagram 13).

STATION 181.

August 25, 1874; lat. 13° 50' S., long. 151° 49' E.

Temperature of air at noon, 78°·3; mean for the day, 77°·2.

Temperature of water at surface, 80°·0; bottom, 35°·8.

Density at 60° F. at surface, 1·02649; bottom, 1·02591.

Depth, 2440 fathoms; deposit, Red Clay, consisting of two layers, the upper containing 6·42 and the lower 32·28 per cent. of carbonate of lime (see Murray and Renard, Deep-Sea Deposits Chall. Exp.).

At 11 A.M. got up steam. At 11.30 A.M. shortened and furled sails and proceeded under steam to sound and trawl. At 1 P.M. put trawl over, and veered 3000 fathoms. At 2 P.M. sounded in 2440 fathoms. The carbonic acid was determined in water from the surface, and amounted to 35·6 milligrammes per litre. At 5 P.M. commenced heaving in trawl, which came up at 7.45 P.M. with a few specimens and some pumice-stones.